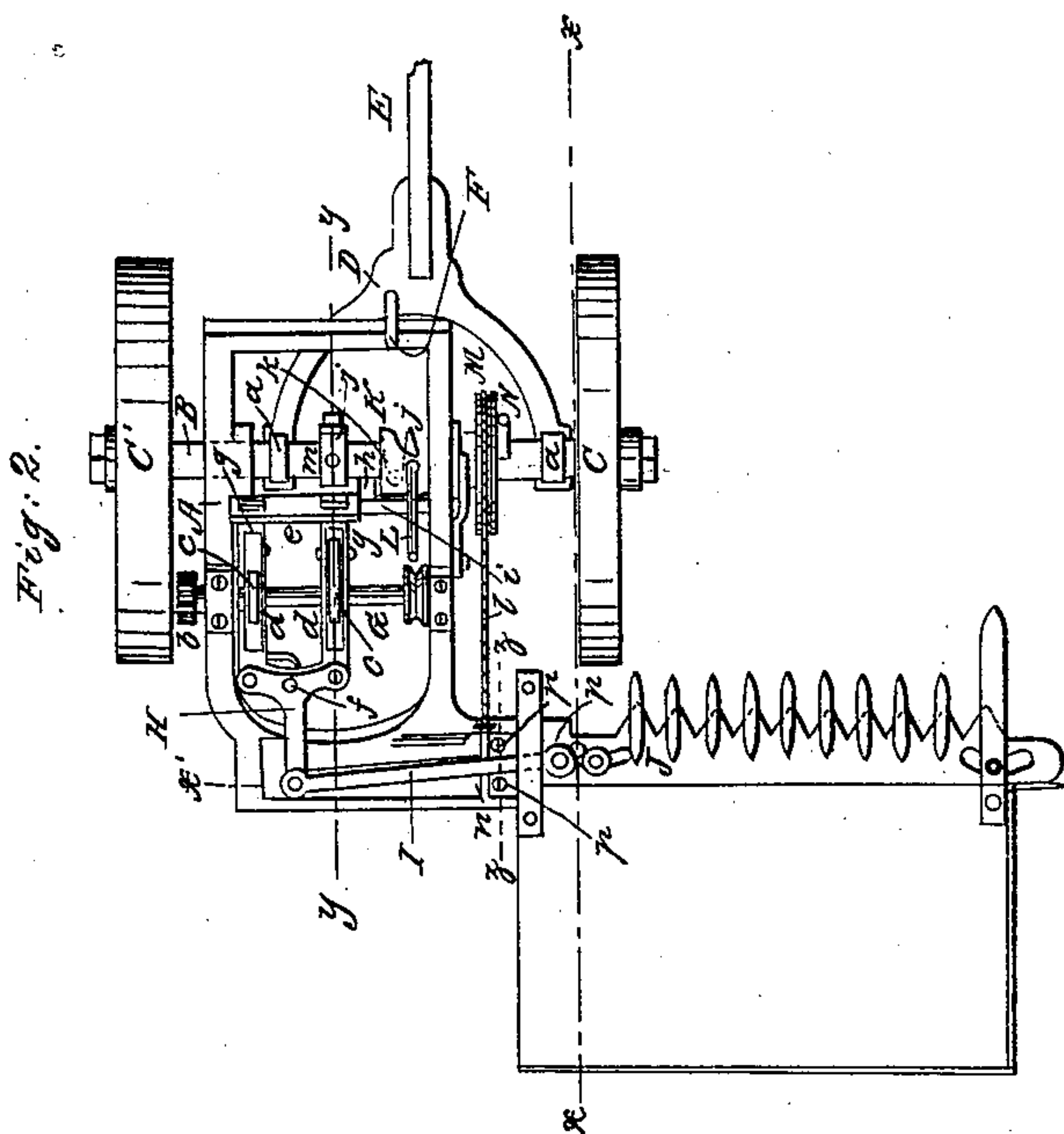
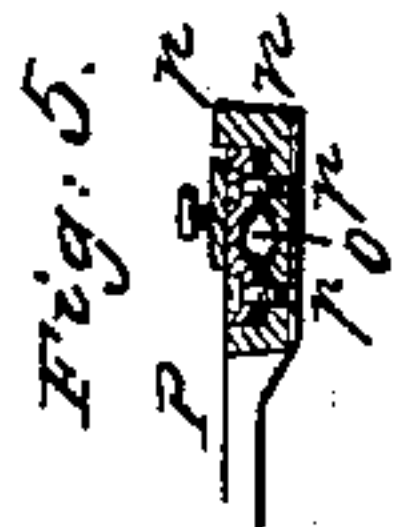


## Harvester.

Patented May 4, 1858.



# UNITED STATES PATENT OFFICE.

R. H. FISHER, OF CLAREMONT, NEW HAMPSHIRE.

## IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 20,152, dated May 4, 1858.

*To all whom it may concern:*

Be it known that I, R. H. FISHER, of Claremont, in the county of Sullivan and State of New Hampshire, have invented certain new and useful Improvements in Grain and Grass Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional elevation of a harvester constructed according to my invention. *xx*, Fig. 2, shows the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a vertical section of the same, taken in the line *x' x'*, Fig. 2. Fig. 4 is a section of the device which drives the sickle, *yy*, Fig. 2, showing the plane of section. Fig. 5 is a transverse section of the joint which connects the finger-bar of the harvester with the main frame. *zz*, Fig. 2, shows the plane of section.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists, first, in a peculiar arrangement of the main frame, whereby the same may be readily raised and lowered and the mechanism which operates the sickle thrown in and out of gear with the driving-wheel with the greatest facility; second, in a novel way of attaching the finger-bar to the main frame, whereby the front edge of the finger-bar and sickle may be more or less elevated, as circumstances may require.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the main frame of the harvester, which is of rectangular or an approximate form, and through which the axle B passes loosely.

C C' are the wheels, which are permanently attached to the axle, C' being the driving-wheel, and cogged or toothed at its inner periphery, as shown clearly in Fig. 1.

D is the fork or hands to which draft-pole E is attached. The inner end of the fork or hands is attached by straps *a* to the axle B.

To the front part of the hands D a spring-catch, F, is attached. This catch attaches the front end of the hands to the front end of the main frame A, as shown clearly in Fig. 1.

G is a shaft, which is placed in the main frame A, and has a pinion, *b*, on its outer end,

and two cams, *c c*, are placed on said shaft, the cams being within the frame A and working within slotted bars *d d*, the upper ends of which are fitted in a guide-bar, *e*, and the lower ends attached to a T-shaped lever, H, which is pivoted within the main frame A, as shown at *f*. The bars *d d* are attached to the ends of the cross-head of the lever, and the end of the other part is pivoted to one end of a connecting-rod, I, the opposite end of which is attached to the sickle J. The cams *c c* may be of triangular or three-sided form, as shown in Fig. 4, and each cam works against a friction-roller, *g*, the rollers being fitted in the upper ends of the slots in the bars *d d*. The cams are placed on the shaft G in opposite positions relatively with each other, so that when the side of one cam is bearing against its roller the point of the other cam will bear against its roller.

K is a collar, which is fitted loosely on the axle B, and between one side of the frame A and a projection, *h*, on a bar, *i*, attached to the main frame. The collar K has a spiral groove, *j*, made in it, and a pin, *k*, which is attached to the axle B, fits in said groove. The collar K has a lever, L, attached to it.

M is a pulley, which is placed loosely on the axle B, and has a lever, N, attached to it.

To the periphery of the pulley M one end of a chain, *l*, is attached, the opposite end of said chain being attached to the back or lower end of the main frame A.

O is the driver's seat, attached to the upper end of a rod, *m*, which is attached to the axle by a strap, *z*.

P is the finger-bar, on which the sickle J works. This finger-bar P is attached to the lower part of the main frame A as follows: The inner end of the finger-bar is recessed on its under side, and a corresponding recess is made in the upper side of the lower end piece, *n*, of the main frame, and the finger-bar and end piece are lapped over each other, a semi-spherical projection, *o*, on the end piece, *n*, fitting in a corresponding aperture in the under side of the finger-bar. Through the finger-bar and end piece screws *p* pass, and as some space is allowed between the finger-bar and end piece, the finger-bar resting on the projection *o*, the front edge of the finger-bar, by adjusting the screws *p*, may be elevated or depressed, and consequently the front edge of the sickle J, as occasion may require.



The operation is as follows: As the machine is drawn along the driving-wheel C' rotates the pinion *b* and shaft G, and the cams *c c*, rotating within the slotted bars *d d*, give an oscillating motion to the lever H and a reciprocating motion to the sickle J, which is sustained at a proper height from the ground in consequence of being connected to the hands D of the draft-pole E by the spring-catch F.

The pinion *b* may be thrown in and out of gear with the wheel C' by operating the lever L, said lever turning the collar K and causing, in consequence of the pin *k* fitting in the slot *j* in the collar, the main frame to move laterally on the axle B.

The sickle J and the finger-bar P may be raised at any time by turning the pulley M so that the chain *l* may act upon and draw up the back end of the main frame A, to which the finger-bar is attached.

By having the main frame A mounted as described it may be readily moved on the axle, and the mechanism which drives the sickle thrown in and out of gear with the driving-wheel with the greatest facility. The finger-bar also, in consequence of being attached to the main frame, as shown, may be adjusted as desired, so as to give the front edge of the sickle J the proper degree of inclination.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Mounting the main frame A on the axle B so that the frame may slide freely thereon, in connection with the spirally-slotted collar K, placed on the axle, and receiving a pin, *k*, attached to the axle, substantially as shown and described, whereby the mechanism which operates the sickle may, when desired, be readily thrown in and out of gear with the driving-wheel.

2. Raising and lowering the sickle J by means of the pulley M, placed loosely on the axle B, and the chain *l*, attached to the back part of the main frame and to the pulley, substantially as described.

3. Attaching the finger-bar P to the main frame A by overlapping the end of the finger-bar and the lower end piece, *n*, of the main frame, the finger-bar resting on a semi-spherical projection, *o*, on the end piece, and adjusted by the screws *p*, substantially as and for the purpose set forth.

R. H. FISHER.

Witnesses:

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SUMNER PUTNAM.